

## BIBC102 Fall Quarter 2015

### Metabolic Biochemistry

Instructor: Eric Schmelz ([eschmelz@ucsd.edu](mailto:eschmelz@ucsd.edu), 858-534-3946 office)

Lectures: Tue/Thur 11:00am-12:20 pm, Peterson 110

Office hours: Muir Biology Building, 1208, Tue 5-6 PM, "green table" Thur 2-3PM

(Note: preferred means of communication is office hours & email)

**Course webpage and Discussion forum 120** ). Your student UCSD e-mail username and password are required for login. For more info on logging in see: <https://ted.ucsd.edu/>. UCSD Extension (concurrent enrollment) students must obtain a registration token from Extension's student services or the ACS Help Desk in order to login to the course website (<https://sdacs.ucsd.edu/~icc/exreg.php>). IAs and TAs will check the discussion board daily including weekends to answer your questions. The discussion board is probably the best place to get your questions addressed.

**Exams:** There will be one Midterm exam and one Final exam. The first Midterm will worth 35% and the Final will worth 50% of your grade. Neither your midterm score nor your Final exam score can be dropped (both scores will be included in your final grade). **No electronic devices (i.e. calculators, cell phones, cameras, etc) or other external items capable of storing information will be allowed during the exams.** If brought, backpacks should be left in front of the classroom during the exam. The Midterm will be 80 minutes long and the final will be 3 hours long. For the Midterm, no bathroom breaks will be allowed; please plan ahead. There will be no make-ups for the Midterms. If you do not take a midterm, you will be assigned a zero to the midterm unless you supply verifiable documents for medical or family emergency to the Professor. If you miss the midterm due to a valid and documented medical emergency your final will worth 90% of your grade. No one may take the Final Exam early. **The grades will be curved.** The midterm will consist of short answer questions, multiple-choice, true/false, and other types of questions. The final exam will be all multiple-choice and will be graded by Scantron. **The Final exam will be comprehensive (materials from every lecture will be covered).** Exams will be based on lectures and assigned readings only.

**Clickers:** You will need an i>clicker for this class. Test i>clicker questions will be asked in class beginning **September 24<sup>th</sup>** as practice, and points begin to be assigned in subsequent lectures starting **September 29<sup>th</sup>**. A similar but not identical number of questions will be asked during each class period. Clicker participation counts **10%** of your grade and is divided into two parts. The first ½ of each point (i.e. 0.5 points) is earned for each clicker question answered and is calculated on the basis of your participation, whether you are either right or wrong. The second half (0.5) of each point is earned when the question is answered correctly. A cumulative total of your clicker points for the quarter will be posted at the end of each week on TED. Once you reach the maximum possible 50 points, your clicker point total will not go any higher. Having a hard time correctly answering questions? Keep attending class and earning participation points. To obtain an i>clicker (must be an i>clicker can buy a new or used one at the UCSD Bookstore or another source. Regardless of source, you will need to register your i>clicker on TED to get credit for your responses: after you login and select this class, in the blue menu block on the left click on "i>clicker Registration". On the next page, enter the serial no. from the back of your clicker. If the serial number is illegible, bring your clicker to the instructor for help. You only need to register the clicker once on TED - if you have done this before for another class at UCSD you

are done. DO NOT register your clicker at iclicker.com – this will not get you into the TED database for UCSD classes!! Do not switch clickers mid-quarter unless it's absolutely necessary but if you must switch, notify the instructor because your two clicker response records will need to be manually stitched together. Allowances will not be made for forgotten or malfunctioning clickers (e.g. dead batteries), absence from class regardless of the reason, or adding the class late. There will be enough “extra” clicker questions to give everyone a fair opportunity to earning the maximum of 50 clicker points in spite of a diversity of challenges that may arise.

**Discussion Sections:** Problem sets will be assigned for each of the 8 full weeks of course content [exceptions include the week of Sept 24<sup>th</sup>, Oct 29<sup>th</sup> (midterm) and Nov 26<sup>th</sup> (Thanksgiving)]. These are designed to help you develop skills in problem solving and analysis that will be important on the exams. They also give you the opportunity to build relationships with fellow students and your Instructional Assistant (IA). 5% of your final grade (6 points per session) will be based on attendance and participation at the Discussion Sections. You can view the discussion section schedule any time at <https://act.ucsd.edu/scheduleOfClasses/>. IAs will be present to help answer any questions you have regarding the problem sets or course material covered.

**Your Grade:** Grades are based on the exams (85%), clicker performance (10%), and participation (5%) in the discussion sections. The Midterm counts for 35% of your grade and the final counts as 50%. Clicker points are described above. The overall total points will be used for statistic analysis and the grades will be curved. The average of the overall points will be a solid **B (not B minus)**. One standard deviation above the average is A. The range from average to one standard deviation below the average is C. For example, if the normalized average is 68 points (out of 100), standard deviation is 16, then 84 and above is A, 68 to 83 will be B, 52 to 67 will be C. Points below 52 will be D or F. In the event that a large number of outstanding students obtain 90% or more of the total available points, fear not, grades will not be curved downward (that's not fair).

Students with accommodations for exams from the Office of Students With Disabilities must provide their accommodation letter to Dr. Schmelz at the beginning of the quarter or as soon thereafter as the letter becomes available. Please contact Dr. Schmelz about a week before each exam to arrange for your accommodation. Please also speak with your IA or TA regarding your accommodation. After the grading of each exam is completed, you can view your score at the Ted course website (go to Tools in the course menu, and click on “My Grades”). A weekly update of cumulative clicker points for the quarter will also posted here at the end of every week. After the quarter ends, your final grade will also be posted here.

**Regrades:** If you find an error in the grading of your exam, you can request a regrade by submitting your exam to Dr. Schmelz in class with a note attached explaining the grading error within one week of when graded exams were first made available for pickup; no requests will be considered after this date. Students interested in the option of regrades must also use non-erasable pen, tests with answers in pencils or removable inks will not be considered. To protect students from unanticipated regrading that results in an overall point reduction, only questions pointed out for regrading will be examined (the whole test will not be re-graded).

**UCSD Policy on Academic Integrity:** All academic work will be done by the student to whom it is assigned without unauthorized aid of any kind. Since clicker questions earn you course credit,

responding to them using another person's clicker will also be considered an act of academic dishonesty. **If the IAs or TAs see a student using more than one clicker, both clickers will be confiscated immediately for the remainder of the class period. Altering an exam and submitting it for a regrade will lead to an automatic F for the course.** Some of the exams will be randomly selected and be photocopied prior to returning them to students. Exams handed in for a regrade will be checked against the original. **Any student caught or suspected of cheating (including those found using two or more clickers in class) will be reported to the UCSD Academic Integrity Coordinator and the Dean of the student's college.** Confirmed cases of cheating will result in the student receiving an F as their final grade and other disciplinary actions determined appropriate by the Academic Integrity Coordinator.

**Text Book:** Lehninger Principles of Biochemistry by David Nelson and Michael Cox, fifth or sixth edition. **Exams will be based on lectures and assigned readings only.**

Lec #	Date	Topic / Title	Lehninger content
1	Thur Sept 24th	Metabolic concepts and Proteins	Chapter 1-5 rev; Ch 6
2	Tue Sept 29th	Enzymes	Chapter 6
3	Thur Oct 1	Bioenergetics and Metabolism I	Chapter 13
4	Tue Oct 6	Bioenergetics and Metabolism II	Chapter 13
5	Thur Oct 8	Glycolysis	Chapter 14
6	Tue Oct 13	Glycolysis and Pentose Phosphate	Chapter 14, 15
7	Thur Oct 15	Krebs Cycle I	Chapter 16
8	Tue Oct 20	Krebs Cycle II	Chapter 16
9	Thur Oct 22	Oxidative Phosphorylation I	Chapter 19
10	Tue Oct 27	Oxidative Phosphorylation II	Chapter 19
	<b>Thur Oct 29th</b>	<b>Mid-term (in class)</b>	
11	Tue Nov 3	Photosynthesis & Carbohydrate biosynthesis	Chapter 19
12	Thur Nov 5	Lipid Catabolism	Chapter 17
13	Tue Nov 10	Lipid Anabolism	Chapter 21
14	Thur Nov 12	Gluconeogenesis and Glycogen	Ch 14; 568-575; Ch 15
15	Tue Nov 17	Amino Acids	Chapter 18
16	Thur Nov 19	Nucleotides	Chapter 22
17	Tue Nov 24	Cancer and Aging	TBA
	<b>Thur 26</b>	<b>Thanksgiving</b>	
18	Tue Dec 1	Exercise	TBA
19	Thur Dec 3	Metabolic Regulation, Diabetes and Obesity	Chapter 23
	<b>Wed Dec 9th</b>	<b>Final Exam (11:30AM-2:29PM)</b>	